

#### Preface

Our everyday life in 2020 was dominated by Covid-19, as it impacted us in a previously inconceivable way. Such extreme occurrences – the financial crisis of 2008/09, Dieselgate, natural disasters such as volcanic eruptions or tsunamis – are by no means the norm, but they have the ability to crush entire industries and economies. One consequence of these disruptions is often economic downturn, which generally results in cost-cutting initiatives and efficiency programs for all kinds of businesses. In the case of the pandemic, the travel and tourism industry was hit particularly hard by the government-enacted shutdown and its aftermath. Global revenue in 2019 was nearly USD 739bn. In 2020, due to Covid-19, it was projected to reach only USD 349bn – a decline of 53 per cent. This affects hotels, transportation, mobility and aviation alike. The volume of scheduled air passengers, for example, was forecast to be 50 per cent less due to the pandemic [1]. The revenue deficits as a result will be tremendous, and operational costs in aviation are high in comparison to other industries. Worldwide passenger revenue was forecast to decline by 58 per cent [2]. Take, for example, the case of Germany's biggest airline, Lufthansa, which was forced to operate 94 per cent fewer flights in March 2020 compared to the previous year [3]. These significant losses in revenue cannot be compensated through cost savings alone: keeping customers in the loyalty loop is just as important.

The number of flights, train rides and so on needing to be canceled or rebooked saw customer services in the travel and tourism industry face great challenges to keep up with the workload created by the Covid-19 pandemic, leading to a spike in complaint requests. SÖP, the arbitration board for public transport in Germany, which includes air, bus, train and cruise travel,

handled 10,000 complaints from the start of the year up to June 2020 - two to three times as many conciliation requests as in the same period in previous years [4]. On average, global call center volumes rose steadily as of March 2020 but achieved stability by May 2020 at a level 16 per cent above pre-pandemic levels [5]. Consequently, customers found themselves waiting in line for unacceptable amounts of time and were sometimes left with no response at all, resulting in high levels of customer frustration; understandably, this negatively influenced customer trust and loyalty. This illustrates that it is particularly important for companies to provide quality customer care during times of crisis. Delivering great customer service establishes sustainable customer relationships that, in turn, can give a company a competitive advantage. When it comes to the digital customer journey in particular, a poor experience can leave a business trailing far behind its competitors. Companies need to find alternate ways to deliver a great customer experience in order to keep their business up and running.

So, how can we deliver a high-quality customer experience in times of crisis while handling a vast quantity of customer inquiries? And how can we handle the aforementioned challenges while cutting costs at the same time? In this context, the discussion on digitization and automation of the customer experience with the help of artificial intelligence is more topical than ever. Conversational artificial intelligence (CAI) in the form of chatbots or digital assistants became particularly popular over the last year. CAI is considered an enabler of conversational commerce, which is defined by the utilization of natural language interfaces for customer interactions. But can it deliver what it promises?

# Three Ways CAI Gives Your Customer Experience a Competitive Edge

The travel and tourism sector is just one example of the many industries that have been destructively affected by the pandemic. Regardless of the pandemic, however, customer needs and demands have changed considerably across industries over the last decades, in the light of technological advances and newly available touchpoints. Today's customers expect a personalized experience anytime and from anywhere. As customer service plays a huge role in delivering a great customer experience, customer service representatives were confronted with big challenges throughout 2020.

For businesses, strategies that enable low-effort customer service are crucial, yet they are not sufficient in providing a value-creating customer experience. The key is to provide value to the customer in return for minimal effort on their part. It is necessary to identify and prioritize critical customer segments and their needs, intelligently route customers to the most adequate service contact and serve them via digital channels. Currently, only 15 per cent of customer interactions create value enhancement. It is worth

noting though that the chance of enhancing value for the customer depends largely on the kind of initial contact they receive. General inquiry calls, or calls to check or change status, have the highest chance of resulting in customer satisfaction, while complaint requests have the lowest [6].

The importance of the customer experience remains relevant during extraordinary times such as the pandemic. According to a recent study, the pandemic even reinforced the importance of the customer experience, and its quality continued to be a significant purchase factor [7]. The consequences of delivering a poor experience to the customer are far-reaching. More than one-third of customers would turn away from a company after only one poor experience. This underlines how vital it is to provide a good experience with complaint requests. While a great customer experience does not guarantee happy customers, an unpleasant experience can surely lead to unhappy and eventually disloyal customers. When customers are confronted with the chance to switch brands, at least four in five choose to stay if they have enjoyed

value-enhancing interactions with customer service. In fact, some customers are more likely to advocate, renew and spend more money [6]. While low prices and discounts are most influential to the buying decision, the quality of customer service is seen as an almost equally important factor. Particularly relevant is availability, quality and convenience when interacting with customer services. Other positive attributes are responsiveness, helpfulness and friendliness. Personalized offers are almost equally significant when it comes to the customer's purchase decision. However, no one single factor determines the competitive advantage – rather, the whole package is decisive [7]. According to SAS, "To entice, support and retain consumers, companies have to take a more analytical, data-driven and personalized approach to customer intelligence" [7]. So, how can we turn a customer experience into a value-enhancing opportunity?

There is certainly no single catchall solution, and delivering a value-enhancing experience requires combining several factors that contribute to a customer's experience. In times of crisis in particular,

when uncertainty reigns for an unknown length of time, CAI opens many opportunities for businesses. Yet, as mentioned above, it is important to consider the reasons for the initial customer contact. Complaint requests, for instance, do not seem to be the most adequate area to begin with. This category offers the lowest chance of achieving value-enhancement as it presents the most complex inquiries that require great know-how, experience and empathy to handle. On the other hand, inquiries characterized by simpler and more repetitive requests ensure a good entry point for the use of CAI. This is because they present a higher chance of achieving value enhancement and typically have a lower level of complexity in classification and training. While chatbots are characterized as more narrowly focused chat agents, digital or virtual assistants are focused on a wider field of expertise with automated mechanisms [8].

In the following segment, we present three areas in which CAI gives your customer experience a competitive edge.



Conversational AI supports the automation of your customer interactions



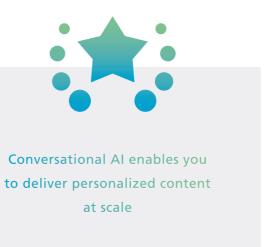
Conversational AI brings your omnichannel presence to a next level

#### Automation of customer interactions

CAI can help to partially automate customer interactions, from marketing and sales right through to service. Use cases in customer service are particularly suited for this. Digital assistants as an augmented workforce can support the initial customer contact by gathering basic information, classifying cases and intelligently routing calls to the right service agent who, by that stage, will have all the relevant information at hand. In this way, it also prevents extensive phone queues. In addition, the application of CAI offers relief to any employee who has direct customer contact. Here, it can take on the simple and repetitive inquiries that often make service employees frustrated. This is significant, as happy employees are strongly linked to customer satisfaction because they are able to deliver a better customer experience [9]. Automation also brings the advantage of scaling customer interactions to an increasing number of inquiries, at a time when budgetary constraints are more present than ever. CAI offers the advantage of starting with small use cases and quickly scaling based on those. In addition, first studies have demonstrated the economic impact of digital assistants or chatbots (in the example of the IBM Watson Assistant) – over a period of three years, they reduced processing times by 10 per cent per case, saving up to USD 7.75 per call on correctly routed calls [10].

#### Omnichannel presence

The average customer uses about ten different channels in order to get in touch with a company and expects consistent experiences across all of them. Despite this, there is still a huge gap between what a customer wants and what companies offer in terms of online customer support [11]. During periods of lockdown in 2020, physical interaction between customers and companies was reduced greatly across industries, meaning dependency on digital channels increased enormously. The number of first-time digital adopters using these channels spiked. Now, almost threequarters are planning to continue using those channels in the future [7]. CAI offers the possibility of availability of customer service anytime on the customer's preferred channel, whether it is via website, messenger or service hotline. Hence, it supports the extension of new digital channels, thus achieving a meaningful omnichannel experience. The aim is to build an integrated, collaboration-enabling and scalable ecosystem with the help of new cloud and open platform services that enable agents to get a 360-degree view of the customer [11]. Through the ability to gather all relevant data across all channels, the company is now able to enrich and personalize content.



#### Relevant and personalized content

A positive effect of applying CAI is the generation of an extensive amount of text data, which can be turned into valuable customer insights. Unstructured text data entails more nuanced information than structured data about the customer's intention and sentiment, which is largely gathered by targeted querying of the customer. In this context, it is essential to track the customer's interaction history in order to access it at a later point. This will eventually offer a unified view of the customer's journey. However, it is not only inbound communication that needs to be considered – outbound activities are also important. CAI can ensure lead generation, as well as following up on such leads in a timely manner without being biased by falsely triggered prioritization that negatively affects lead qualification and ranking. All of this supports a data-driven approach to the customer experience, which is more targeted, relevant and personalized. In addition, it can provide personalization at scale when combined with automation and an omnichannel presence.

Due to the pandemic, the use of digital communication channels increased dramatically in 2020. Among the most relevant channels are text and voice-based chatbots [12]. By now, CAI, in the form of chatbots or digital assistants, is especially common when it comes to simple self-service scenarios. These scenarios include the gathering of initial information, providing agents with guidance and greeting customers [13]. However, the application possibilities of CAI are conceivable in a wide range of industries and use cases along the customer journey.





## How to Enhance a Customer Experience With CAI

Referring back to our initial case of the travel and tourism industry, a great example of how digital assistants can improve customer service is provided by KLM Royal Dutch Airlines [14]. BlueBot (BB), KLM's chatbot, helps users along the customer journey in order to find destinations, book flights, pack suitcases and get flight and travel information. It can even provide the boarding pass. BB is available via Facebook Messenger and Google Assistant. These platforms are already integrated in most customers' lives, which lessens the chances of them experiencing app fatigue, or the inhibition to download a new app or visit the website to talk to a chatbot [15]. Another success factor of BB is its personality. The chatbot displays a helpful, nonchalant character and is able to make light jokes. The use of such guips, along with the chatbot's personality, not only matches our modern digital habits but also gives a sense of casual communication – just like customers are used to in their personal interactions. BB can support the user throughout the whole planning and booking process, but will refer the customer to a human customer service assistant if it is unable to act or if the customer seems to be dissatisfied [14]. This is a very important function from a customer experience point of view. With BB, KLM is implementing an omnichannel strategy, thus improving anytime accessibility for customers around the world [16].

In order to provide relevant assistance, as KLM did with BB, it is a prerequisite to know your customer. In gen-

eral, it is about understanding: Who is your customer? What are your customer's behaviors and needs? And, why should they choose your service? The answers to these questions not only determine the requirements for the digital assistant, they are also integral for the vision of the companies' customer relationship and for achieving lifetime customer loyalty [17]. In the end, the digital assistant must generate added value for the customer. Therefore, customers who are able to use a digital assistant should be the focus from the very beginning – that is, development should target personas and the ability to understand needs along the customer journey. Describing the personality of a customer helps to discover what is most important on that customer's journey and thus reveals the requirements of the digital assistant. Knowing your target group and visualizing their pains and gains within a persona will help to create an advantage in design decisions and the development process. The daily life of the persona is another factor that plays an important role as it determines acceptance and usage criteria for the digital assistant [18].

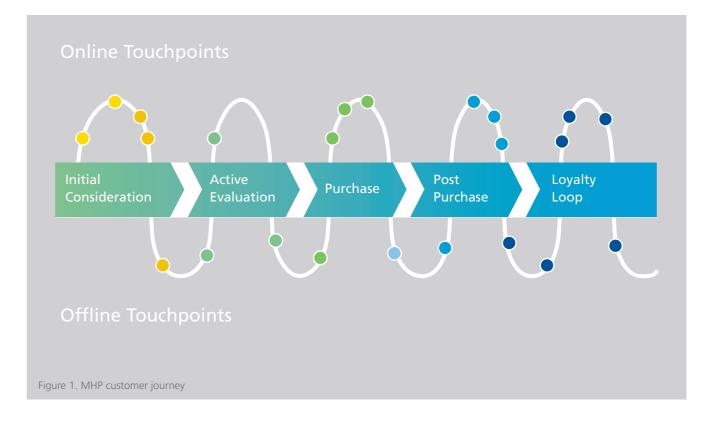
Mapping individual needs along the customer journey is a process of tracking the experiences at each touch-point and taking into account what happens to the customer, how they react and how it makes them feel [17]. This will ultimately help us understand the right way in which to communicate and be of assistance. Along the customer journey, there are several steps a

potential customer will take, from the initial consideration and evaluation of a product or service through to purchase and usage, until finally engaging loyalty with a brand. Each phase consists of various online and offline touchpoints with which the customer interacts. At each of these touchpoints, customers expect a consistent experience, which ideally will be personalized. Creating these consistent but individualized experiences is a challenge, which brings us back to the fundamental requirements – knowledge about your customers and their patterns of behavior. Hence, relevant data is the building block upon which everything is based.

Across industries, the customer journey is increasingly augmented by mobile devices, making mobile an ideal medium through which to connect to the customer in order to support critical moments in their journey [19]. A decisive success factor for customer acceptance is the implementation of a digital assistant channel, as well as its integration into the critical phases of the customer journey. For instance, people seem to be hesitant when it comes to downloading special apps for communication with companies [20]. After all, the number of apps most people use daily is quite limited. That's why integration into the customer's privately used channels, such as WhatsApp, Messenger, or WeChat, is a powerful way of communicating. Furthermore, it reduces the distance and the effort required to communicate with a company. When a company has omnichannel presence, mobile devices can help connect online and offline touchpoints with

a consistent experience while supporting customers when they have an immediate need for information. This is the moment in which a customer makes a decision. Google defines these moments, which are the intersection of user experience, customer journey and mobile usage, as "micro-moments." They can be separated into I-want-to-know, I-want-to-go, I-want-to-do and I-want-to-buy moments. If you pay attention, you will find them several times in your daily life [21]. Using the example of a traveler's journey, these moments could be "When does my flight leave?" (know), "Where is the nearest Starbucks?" (go), "I need to get a visa!" (do) or "I want to get new sunglasses for my trip!" (buy). So, why is all of this so important for companies?

When customers do research, they look for the most relevant information, regardless of which company offers this information [19]. Considering the many digital touchpoints a customer encounters while researching, companies need to earn and re-earn the customer's attention. To win over the customer, being there and concisely presenting the relevant information is the key to engagement. In the best case, the company acts as an advisor [21] that interacts consistently at each touchpoint. HBR states: "What starts as a micro-moment often leads to engagement and even consummation within other channels" [22]. Digital assistants can even go a step beyond, as they can act in a situation-driven manner – that is, providing the right information in the moment of need.



## Six Fields of Action for Successful Conversational Commerce

Although the pandemic significantly accelerated the implementation of CAI solutions, there are still countless examples of interactions that lacked intelligence and personalization and consequently missed out on customer acceptance. Therefore, it is essential to realize the capability of understanding individual requests. Deploying interactive FAQ seems to be a value-adding use case to familiarize the customer with the solution from the beginning, but simple self-service scenarios transferred to a chatbot will not live up to the ever-increasing customer demands on a company's interaction.

This raises the question of how to make CAI solutions smarter in the future in order to increase customer acceptance and enhance the customer experience.

Implementing intelligent digital assistance is still a challenging task, although technologies are improving rapidly in this field, as are expert experiences in deployment. Based on the aforementioned research evidence and MHP's practical experience in this field, we recommend six fields of action (Fig. 2).



**1. Fix the basics:** get your data in order



**2. Engage yo**ur customer:
enrich and personalize content



3. Define a brand-matching personality: realize graceful and over strategies



4. Choose a hybrid approach: combine rules-based and machine learnin models



5. Build upon integrated and scalable cloud solution:
get a full view on



**6. Apply automation:** complete tasks for your customer

Figure 2. Fields of action in order to implement smarter CAI solutions

### 1. Fix the basics: get your data in order

In a study on user acceptance of chatbots, more than half of the respondents complained about the lack of handling individual or complex requests [23]. A digital assistant can only be as smart as the data it is built upon. This means that if a company fails to fix the basics and it does not get its data in order, it will fail equally at building a smart solution that satisfies customer requests. Certainly, this is not an easy task. Large, established companies with a historically grown silo system landscape, in particular, struggle greatly to bring all the data together while making it accessible to company stakeholders. But data alone is not enough. It is necessary to transform data into knowledge. But what is the difference between data and knowledge? Data itself comprises pure facts, signals or symbols without any consistency or context. Information, as the next level, is data that is structured consistently. Knowledge, however, is enriched information where context and meaning are interpreted [24]. In the future, knowledge graphs will not only make various information available but even go one step further in collecting and connecting customer-relevant data. This is especially valuable to digital assistants as probabilities help to prioritize the questions to be asked, and new information can be added anytime. The data sources can be diverse, for example product catalogs, sold items, synonyms of terms or a list of questions to be asked. Eventually, knowledge graphs foster disambiguation in a conversation and empower personalization through recommendations [25].

### 2. Engage your customer: enrich and personalize content

Although each communicative system and each use case has individual requirements, generally valid characteristics can be assigned to conversational experiences. According to Forrester, firms should offer highly personalized experiences that are tailored to the user's interests, context and behaviors. These characteristics should be considered in every phase of the customer journey. Unfortunately, a lot of conversational platforms currently leave customers unsatisfied in terms of personalization, usability and customer experience. Providing relevant and rich content is a success factor that can be accomplished by using CAI and automation to conduct a smooth dialog with customers.

Therefore, companies need to gain capabilities like understanding the history and context of their customers and deliver more than just FAQ. When integrating digital assistants into the customer journey, the user's perspective should always be taken into account in order to create value and convenience [26].

#### 3. Define a brandmatching personality: realize graceful handover strategies

As already noted, a lot of digital assistants lack intelligence and personality, which is a major reason for the refusal of some chatbots [27]. Along with this comes the need for handover strategies, in which a human takes over control in order to prevent a poor customer experience. Success will mainly depend on the ability to account for the real and human aspects. In order to enable handover, the CAI solution needs to be integrated or linked to the customer service solution. Further, it's recommended to create a brand-matching personality for the digital assistant, which meets the typical preferences of your customers [28]. In general, soft features are crucial for the success of digitals assistants. Gartner recommends ensuring that digital assistants reflect the company's values and have a pleasant tone [29].

## 4. Choose a hybrid approach: combine rulesbased with machine learning models

Rules-based models (linguistic models) provide flexibility and control over the question-and-answer process. The models work with if/then logic to create conversational flows, wherein also lies the disadvantage. Language is very multifaceted and offers endless variations and nuances. Equally, the work to define all the rules needed for customer interaction would be infinite. Moreover, next to the tremendous workload, rules-based models are slow to develop and somehow rigid in their way of communication. This model type is mainly applicable to specific and strongly structured use cases. Hence, it is often applied with FAQ chatbots. Pure machine-learning models, on the other hand, learn from patterns and previous experiences. They are equipped to handle more demanding and

personalized requests that require contextual awareness. However, they can easily turn into black boxes in which optimizations or improvements are hard to realize. Not to mention the vast amount of data that is needed for the training of the solution. The key is to combine both approaches. This creates transparency over the training and creates consistency in terms of interactions. Moreover, it needs less data and can be developed at speed. In addition, it self-learns based on pre-defined rule-based data [30].

## 5. Build upon integrated and scalable cloud solutions: get a full view on customer interactions

Talking from experience, many current CAI initiatives at companies are mainly individually driven by functional departments. This results in the adoption of various solutions, which are mostly disconnected from each other and usually involve different vendors. That means the chatbots are only capable of providing information specific to their field. For customers, this is frustrating when interacting with such a solution. To ensure a great omnichannel experience, it is important to build the CAI solution upon an integrated and scalable cloud ecosystem that enables data sharing and gives a 360-degree view of the customer. This means that all relevant data can be collected across all touchpoints with which the customer interacts, whether it is a call to customer service, a former purchase activity or an advertised marketing campaign. It ensures that all relevant customer information is collected, aggregated and made accessible for further needs and customer interactions. Having the history of the customer, the next interaction will continue right from where the customer left the conversation, either on the same or another channel. Undoubtedly, having to start over and over again with every company interaction is anything but satisfying to a customer.

### 6. Apply automation: complete tasks for your customer

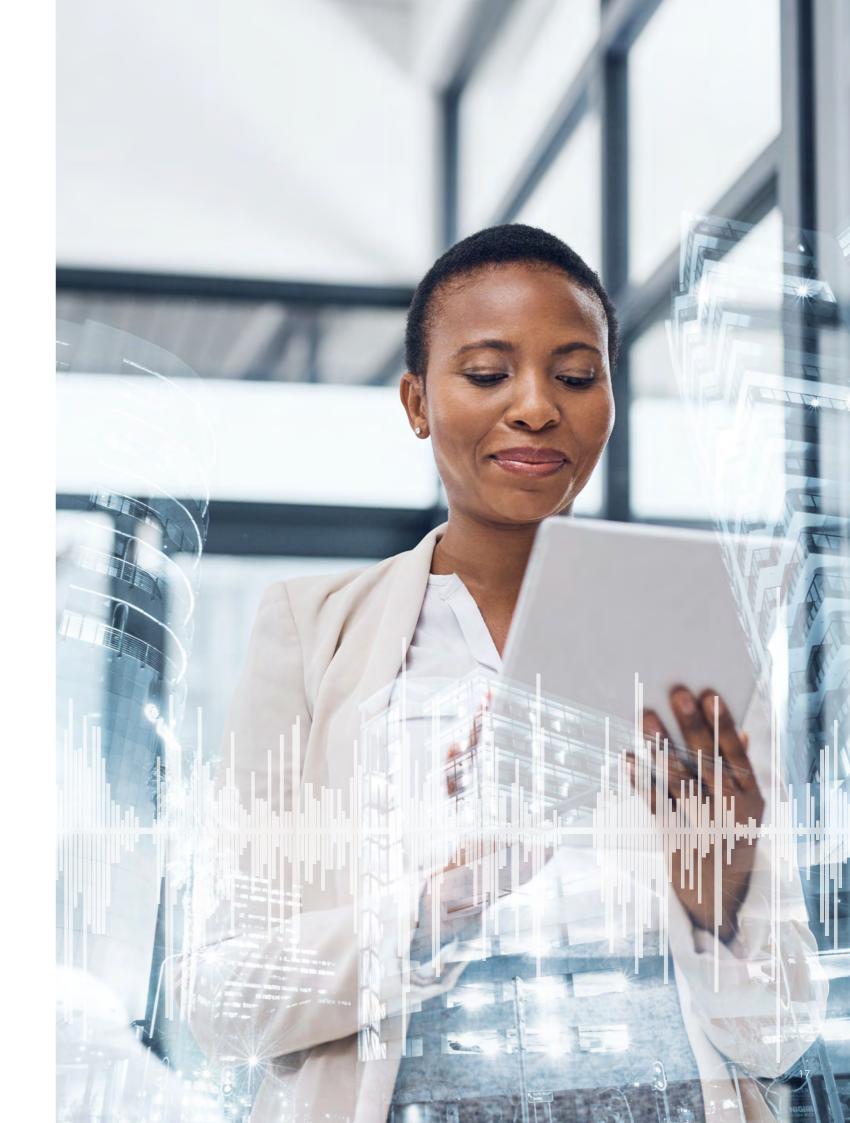
When only automating the conversation with the customer itself, customers will soon be left with unpleasant and annoying tasks while interacting with the CAI solution. Hence, not only should the conversation itself be automated but also the processes and tasks for the customer. With the help of robotic or intelligent process automation, processes and tasks can be performed by the software. The focus of this mainly rests on the standardization of back-office processes, which are mostly characterized by simple and repetitive tasks, even though the automation of front-office tasks in sales and customer experience help to increase business value by achieving differentiation [31]. In customer service, for instance, data entry, validation and extraction of customer data can be automated. In sales, automation can support the handling of order entries more efficiently and swiftly. This leads to a higher likelihood of sales being closed and improved customer satisfaction. However, there are back-office tasks in customer service that are also relevant to automate, such as the assistance for service agents, which in return can lead to an enhanced customer experience by further creating convenience for customers. Ultimately, linking the automation of back-office and front-office areas will take your customer experience to the next level.

## Toward an Exceptional Customer Experience With CAI

Undeniably, the pandemic has demanded big sacrifices from almost everyone and brought hardship in many ways. Yet, there is just one direction in which to move – forward. In some regards, the pandemic has also had positive side effects. In reference to digitization, companies accelerated their transformation by years and even intend to invest more money than initially planned in the upcoming years. In the context of CAI, the pandemic pushed the market of chatbots and digital assistants forward to an unforeseen extent. Nonetheless, there is still much more to come – we are only seeing the beginning of digital assistants. The potential of CAI to enhance the customer experience is large and multifarious. Already before the onset of the pandemic, the potential market size of digital assistants was forecast to be at USD 21.8bn in 2025. This is more than triple what was forecast for 2020 [32]. Customers are eager to use digital channels in order to make contact with companies anytime, anywhere. At the same time, it offers

various possibilities for optimizing costs and enhancing internal efficiencies. Today, in order to achieve a competitive edge, companies need to lay the groundwork for delivering an exceptional and differentiated customer experience. CAI might not deliver all the promised aspects at present, but technologies and expertise in this field will continue to advance rapidly. However, it all begins with the identification of adequate, value-enhancing use cases and a sufficient data basis.

There are a variety of use cases and best practices we are eager to share and discuss with you. With our fundamental experience in the fields of CAI, robotic process automation and data science, we can assist you in identifying value-adding use cases and accompany you toward the realization of an end-to-end AI solution that enables a value-enhancing customer experience.



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